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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,322	09/22/2003	Edward J. Cheal	APK-001.02	2321
25181	7590	05/27/2004	EXAMINER	
FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110			STEWART, ALVIN J	
			ART UNIT	PAPER NUMBER
			3738	

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/605,322		CHEAL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Alvin J Stewart		3738	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/25/04</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 9 and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Powell US Patent 5,906,644.

Powell discloses a joint prosthesis comprising a head member (see col. 2, lines 25-31), a neck member (20), a base, a plug (23), a spigot (22) having a first and second cylinders (see attachment), a stem member (24), a proximal end (52), a stem bore (28) (see Fig. 7) having a friction-tight-press-fit (see col. 5, lines 20-26) and a shaft (12).

Regarding claims 2 and 13, see aperture receiving bolt 36 (see Fig. 3).

Regarding claim 9, see Figures 1-3.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 10, 11, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell US Patent 5,906,644 in view of Murphy US Patent 5,653,764.

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Powell discloses the invention substantially as claimed. However, Powell does not disclose a plurality of receptacles on the neck member to receive a key protruding from the proximal end.

Murphy teaches a joint implant comprising a modular member divided in two parts the implant is selectable to different orientations. A first member has a plurality of keys and a second member has a plurality of apertures so the implant can have different angular configurations (see Figs. 8 & 9; and col. 6, lines 52-60) for the purpose of preventing any relative angular motion between the stem portion and the neck portion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Powell reference with the Murphy selectable angular orientation implant in order to prevent any relative angular motion between the stem portion and the neck portion.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell US Patent 5,906,644 in view of Luman US Patent 5,002,578.

Powell discloses the invention substantially as claimed. However, Powell does not disclose a transition zone of tapering diameter between the first and the second cylinder.

Luman discloses a modular implant (10) comprising a spigot (40) coming out from the base of a neck member (14) comprising first and second cylinders (44 & 42). Figure 3 discloses a tapered transition surface between the first and the second cylinders for the purpose of avoiding the concentration of stresses in one single point.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Powell reference with the Luman reference in order to avoid

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the concentration of stresses in one single point. Tapered transitions are well known in the mechanical art (e.g. bolts, cantilever structures, etc.).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell US Patent 5,906,644 in view of Jacobs et al US Patent 5,080,674.

Powell discloses the invention substantially as claimed. However, Powell does not disclose a protrusion fixedly located in the stem bore and an axially oriented slot.

Jacobs et al discloses a protrusion (18) on a bore (14) having a spigot (36) with an axially oriented slot (see Figs. 7-9) for the purpose of resisting the subsequent separation of the post from the bore.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Powell reference with the Jacobs et al reference in order to resist the subsequent separation of the post from the bore.

Claims 7, 8, 12, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell US Patent 5,906,644 in view of McTighe et al US Patent 5,653,765.

Powell discloses the invention substantially as claimed. However, Powell does not disclose a plurality of tines defined by slots and the slots form an acute angle.

McTighe et al teaches a modular implant comprising a plurality of tines defined by slots (25 & 27) for the purpose of providing flexibility in torsion, flexibility in different planes, reduce hoop stress and reduce thigh pain (see col. 5, lines 60-67 and col. 6, lines 1-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Powell reference with the McTighe et al reference in order to

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provide flexibility in torsion, flexibility in different planes, reduce hoop stress and reduce thigh pain.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the tines and slot of the McTighe et al by having at least three tines defined by slots in the shaft, the slots forming an acute angle because Applicant has not disclosed that the three slots forming an acute angle provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the four 90° angle slots shown in Figure 2 because the McTighe et al reference will perform equally well with the four elongated slots as shown in Figure 2 because it will provide the same intended use as the applicants' invention (e.g. it will provide flexibility in torsion, flexibility in different planes, reduce hoop stress and reduce thigh pain).

Therefore, it would have been an obvious matter of design choice to modify the McTighe et al reference to obtain the invention as specified in claims 12 and 19.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin J Stewart whose telephone number is 703-305-0277. The examiner can normally be reached on Monday-Friday 7:00AM-5:30PM(1 Friday B-week off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on 703-308-2111. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*A. Stewart*

Alvin Stewart  
May 25, 2004.